EXPRESS5800/1080Xd

Installation Procedures

Proprietary Notice and Liability Disclaimer

The information disclosed in this document, including all designs and related materials, is the valuable property of NEC Solutions (America), Inc. and/or its licensors. NEC Solutions (America), Inc. and/or its licensors, as appropriate, reserve all patent, copyright and other proprietary rights to this document, including all design, manufacturing, reproduction, use, and sales rights thereto, except to the extent said rights are expressly granted to others.

The NEC Solutions (America), Inc. product(s) discussed in this document are warranted in accordance with the terms of the Warranty Statement accompanying each product. However, actual performance of each product is dependent upon factors such as system configuration, customer data, and operator control. Since implementation by customers of each product may vary, the suitability of specific product configurations and applications must be determined by the customer and is not warranted by NEC Solutions (America), Inc.

To allow for design and specification improvements, the information in this document is subject to change at any time, without notice. Reproduction of this document or portions thereof without prior written approval of NEC Solutions (America), Inc. is prohibited.

Trademarks

All product, brand, or trade names used in this publication are the trademarks or registered trademarks of their respective trademark owners.

PN: 455-01691-000 September 2003

Copyright 2003
NEC Solutions (America), Inc
10850 Gold Center Drive, Suite 200,
Rancho Cordova, CA 95670
All Rights Reserved

Contents

Introduction 1
Symbols and Conventions 1
Safety Notices 2
    Safety Notices for Users Outside of the U.S.A. and Canada 3
If You Need Help 3
Selecting a Site 3
Unpacking the Server 4
    Unpacking Procedure 5
    Installing the Side Stabilizer Kit 12
    Attaching the LAN Cable and Power Cord 12

Introduction

These installation procedures provide information for unpacking and installing the Express5800/1080Xd Server. Read these procedures in their entirety before performing the installation to become familiar with the components and the sequence of steps you will perform.

Symbols and Conventions

This guide uses the following text conventions and graphics symbols.

Warnings, cautions, and notes have the following meanings:

WARNING

Warnings alert you to situations that could result in serious personal injury or loss of life.

CAUTION

Cautions indicate situations that can damage the system hardware or software.

Note: Notes give important information about the material being described.

Safety Notices

⚠ WARNING

To avoid a risk of injuries, installation should be performed by trained technical personnel.

It takes at least two people to unpack your server and two people to maneuver the server, after unpacking.

Your server is equipped with a front stabilizer. Engage the front stabilizer during installation. For stability and to distribute the weight, also attach side stabilizers. Otherwise, the rack may topple over and cause injuries.

If you extend two or more devices from the rack at the same time, the rack may topple over on you. Extend only one device from the rack at a time.

Exercise great care not to hurt your fingers on the rail when you mount/dismount the equipment into/from the rack.

- Elevated Operating Ambient Temperature – If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient environment. Therefore, consideration should be given to installing the equipment in an environment compatible with the a maximum rated ambient temperature of 35°C.
- Reduced air Flow – Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- To prevent fires, and damage to rack equipment and supply wiring, make sure that the rated load of the power branch circuit is not exceeded. Equipment nameplate ratings should be used when addressing this concern. For more information on installation and wiring of power-related facilities, contact your electrician or local power company.
- To prevent electrical shock, connect all rack and rack support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.
- For safe operation, only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the USA those wiring standards are regulated by Underwriter Laboratories (UL); in the U.K. by the Institution of Electrical Engineers, (IEE) and in Canada by the Canadian Standards Association (CSA).

Safety Notices for Users Outside of the U.S.A. and Canada

- **PELV (Protected Extra-Low Voltage) Integrity:** To ensure the extra-low voltage integrity of the equipment, connect only equipment with mains-protected electrically-compatible circuits to the external ports.
- **Remote Earths:** To prevent electrical shock, connect all local (individual office) computers and computer support equipment to the same electrical circuit of the building wiring. If you are unsure, check the building wiring to avoid remote earth conditions.
- **Earth Bonding:** For safe operation, only connect the equipment to a building supply that is in accordance with current wiring regulations in your country. In the USA those wiring standards are regulated by Underwriter Laboratories (UL); in the U.K., by the Institution of Electrical Engineers, (IEE) and in Canada by the Canadian Standards Association (CSA).

If You Need Help

Contact NEC Technical Support at **1-866-269-1239**.

Selecting a Site

The server operates reliably in a computer room environment. Choose a site that is:

- Near grounded, three-pronged power outlets.

Note: For the United States and Canada, this means NEMA 5-15R outlets for 100-120 VAC or NEMA 6-30R outlets for 200-240 VAC. For other international sites, this means three-pronged power outlets applicable for the electrical code of the region.

WARNING

Be sure the power service connection is through a properly grounded outlet.

WARNING

All AC connections to the server must be plugged into the same common ground power outlets.

- Clean, dust-free, and well ventilated. Front and rear and top ventilating openings kept free of obstructions. Away from sources of heat, vibration or physical shock.
- Isolated from strong electromagnetic fields and electrical noise produced by electrical devices (such as air conditioners, large fans, large electric motors, radio and TV transmitters, and high-frequency security devices).
- Spacious enough to provide at least 2 feet (0.6 meters) behind the server, 3 feet (1.0 meters) in front of the server and 19.0 inches (0.5 meters) on each side of the server for proper cooling, airflow, cable clearance and maintenance.
- Easily accessible for server maintenance and installation of server upgrades.

Unpacking the Server

⚠ CAUTION

If the packaged server has come from an environment which is significantly warmer or colder than the environment in which it is to be installed, leave the server in it's shipping container for at least 24 hours at room temperature before removing any packaging. This will prevent damaging condensation from occurring.

⚠ WARNING

The server weighs approximately 440.0 pounds (199.6kg). If the server contains numerous components, it will weigh more. To avoid personal injury, make sure you have someone help you unpack and move the server.

When you receive the server, check to see if the shipping boxes are damaged, note the damage, and if possible, photograph it for reference. After removing the contents of the containers, keep the cartons and the packing materials. If the contents appear damaged when you unpack the boxes, file a damage claim with the carrier immediately.

The server cabinet is covered with a vinyl shroud for anti-dew-condensation protection. The packaged cabinet is loaded onto the pallet, outer shipping covers are attached, and the covers are fastened with plastic straps. The server is loaded into the shipping container with the front of the server facing the rear of the container. A ramp for loading and unloading the cabinet is also included in the shipping container.

Figure 1 shows the Model 1080Xd shipping containers. The server is contained in the larger of the two containers. The smaller container includes the following contents:

- Server Stabilizer Kit
- Accessory Box

Figure 1. Shipping Containers

Unpacking Procedure

Note: It is recommended that you save the shipping container, should the server require transport to another location at a later date.

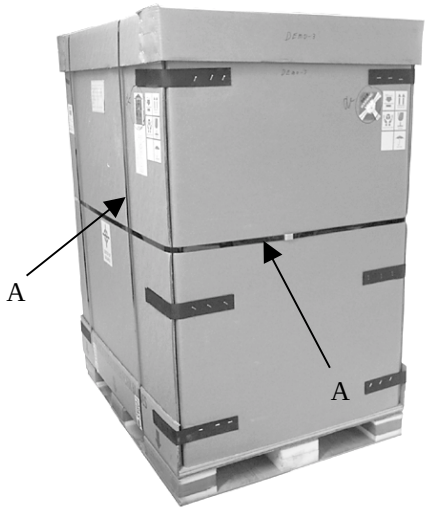
⚠ WARNINGS

Plastic straps securing the packaging may cause injury if the belts snap loose when cut. Use caution when performing the first step of this procedure, protecting the hands and face.

Handling the wooden unloading ramp and the pallet can cause splinters. The use of gloves is recommended.

1. Move the server as close as possible to the computer room where the server is to be installed.

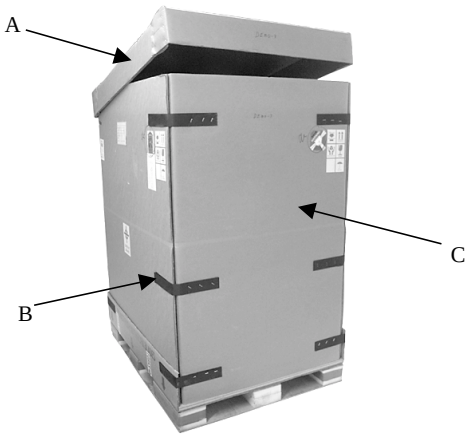
2. Plastic straps secure the shipping box around the server. Carefully cut and remove the plastic straps securing the sides and top of the shipping container. See Figure 2A. It is recommended that you wear gloves and protective eye wear when cutting the plastic straps.



A Plastic Straps

Figure 2. Shipping Container Plastic Straps

3. Lifting upwards, remove top shipping cover. See Figure 3A.
4. Release the Velcro tapes that secure the front, rear, and side covers of the shipping box. See Figure 3B.
5. Remove the shipping container surrounding the server and set it aside. See Figure 3C.



A Shipping Cover
B Velcro Straps
C Shipping Container

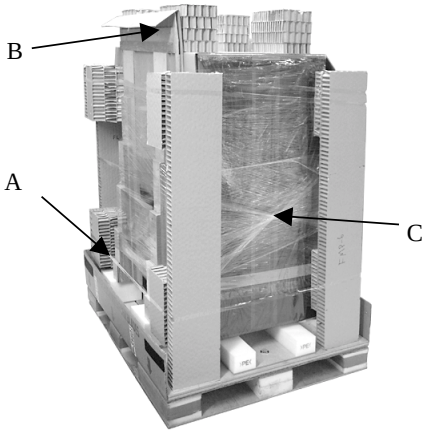
Figure 3. Removing the Cardboard Covers

⚠ WARNING

Plastic belts securing the packaging may cause injury if the belts snap loose when cut. Use caution when performing the first step of this procedure, protecting the hands and face.

6. Cut the strap or tape securing the corrugated cardboard end pieces protecting the corners of the server. Remove the four corner protectors and set them aside. Note the positions of the corner protectors that are marked FR (front right), FL (front left), RR (rear right) and RL (rear left). See Figure 4A.

7. Remove the corrugated cardboard protecting the top of the cabinet. See Figure 4B.



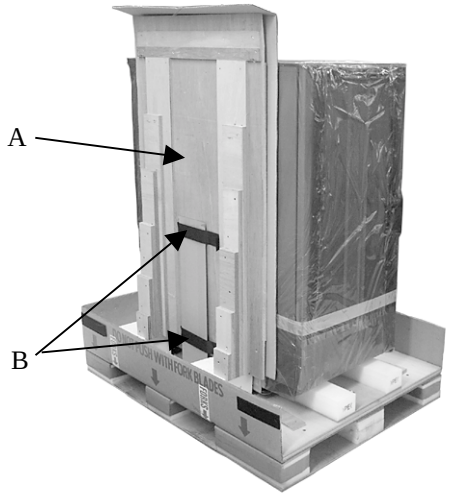
A Strap
B Top Corrugated Cardboard
C Plastic Stretch Film

Figure 4. Removing the Corner and Top Protectors

8. Cut and remove the plastic stretch film that is wrapped around the server. See Figure 4C.

9. Remove the unloading ramp and set it aside. See Figure 5A.

10. A metal ramp plate is attached to the unloading ramp. Release the Velcro strips and remove the ramp plate from the unloading ramp. See Figure 5B.



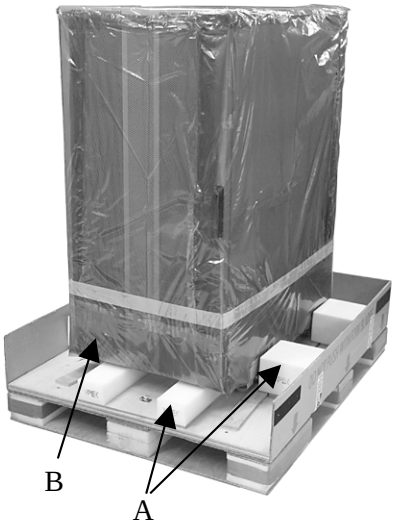
A Unloading Ramp

B Velcro Strips and Ramp Plate

Figure 5. Removing the Unloading Ramp

11. Four Styrofoam stoppers prevent the server from moving during shipment. Wing nuts secure Styrofoam stoppers, located on both sides of the server as well as the front and rear of the server, to the shipping pallet. Remove the four wing nuts and remove the stoppers and set them aside. See Figure 6A.

12. A plastic sheathing secured with tape, protects the bottom sides of the server. Remove the tape and then cut and remove the bottom sheathing. Be careful not to damage the upper vinyl shroud. Be sure the bottom sheathing is free and clear of the server wheels and levelers. See Figure 6B.



A Styrofoam Stoppers

B Lower Plastic Sheathing

Figure 6. Removing the Cardboard Covers

13. Place the unloading ramp in front of the rear of the server and secure the ramp to the pallet using the ramp plate removed in Step 10. See Figure 7.

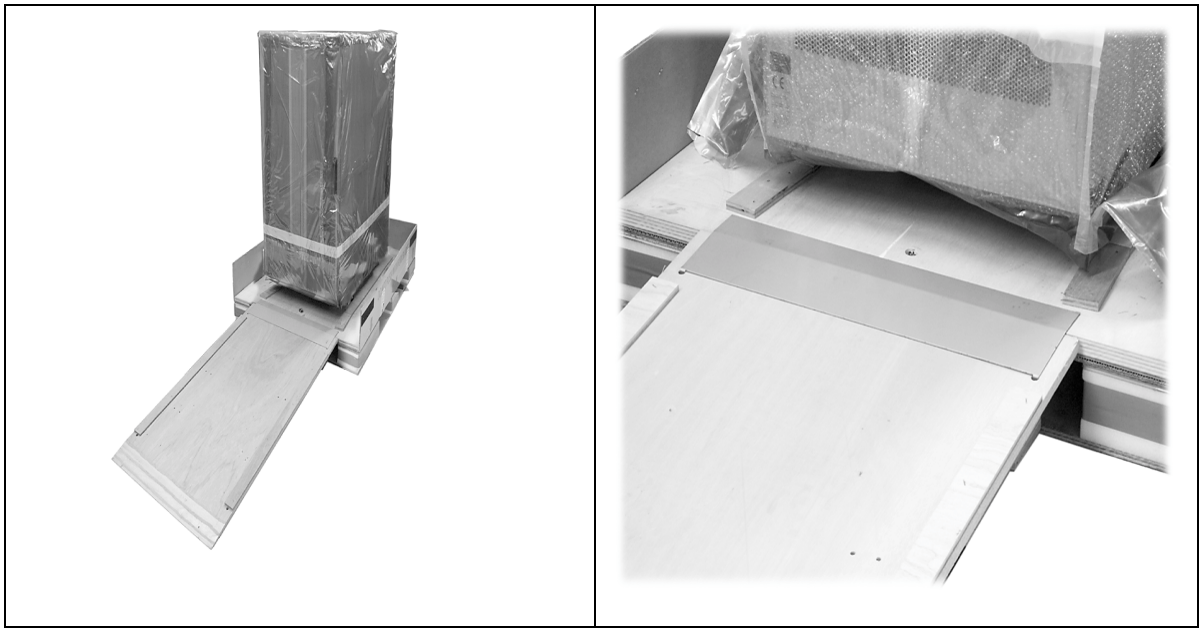


Figure 7. Installing the Unloading Ramp

⚠ WARNING

The server weighs approximately 440.0 pounds (199.6kg). If the server contains numerous components, it will weigh more. To avoid personal injury, make sure you have someone help you unpack and move the server.

⚠ CAUTION

Exerting excessive pressure on the server cabinet doors may damage them. When performing the next step, be sure to grasp the corner frame of the server when pushing the server towards the unloading ramp.

14. Position a person at the front of the server (rear of pallet) and one person standing on the ramp at the rear of the server. Grasp the corners of the server. Do not put pressure on the center of the front or rear cabinet doors. See Figure 8.

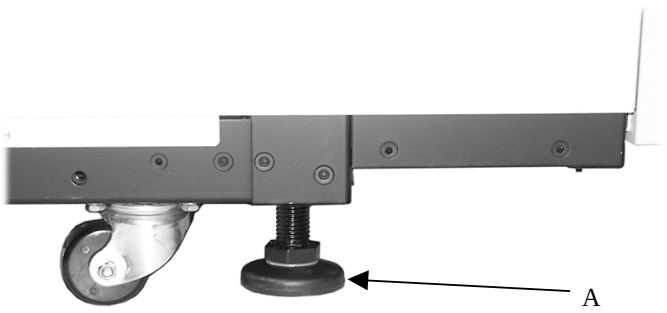
Figure 8. Rolling the Server Down the Ramp

15. With another person pushing on the front corners of the server, the person standing on the ramp should stabilize the movement of the server and guide the server down the center of the unloading ramp. Guide strips are positioned along the sides of the ramp to prevent the server from falling off the sides of the ramp. See Figure 8. Remove the server from the shipping pallet.

16. Once the server is removed from the pallet, remove any bubble-pack and the shroud that covers and protects the server.

17. With the assistance of another person, move the server to the selected location in the computer room.

18. Once the server is located in its designated position, using an adjustable wrench, lower the leveling pads to secure the server in place.
See Figure 9A.



A Leveling Pad

Figure 9. Lowering the Leveling Pads

20. At the front of the system, remove the single screw securing the front stabilizer and pull the stabilizer out from the cabinet as shown in Figure 10.

Figure 10. Releasing the Front Stabilizer

Installing the Side Stabilizer Kit

> ***Note:*** The Side Stabilizer Kit is included in the Accessory box.

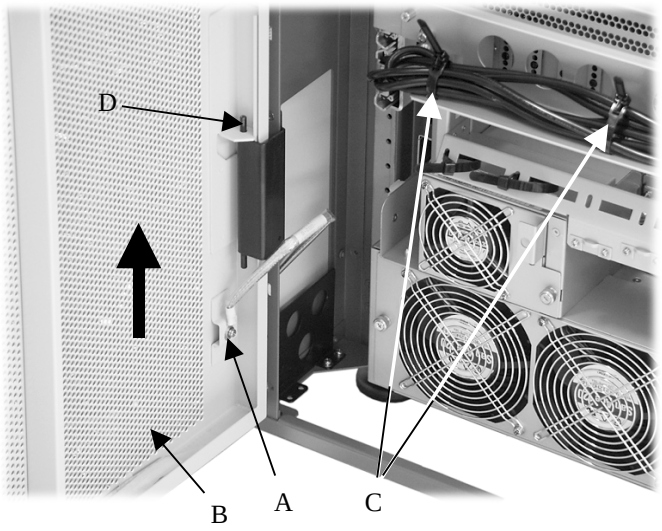
1. Position a stabilizer bracket on each side of the cabinet.
2. Secure each stabilizer bracket to the cabinet with three M4 screws provided. See Figure 11.

A Side Stabilizers

Figure 11. Installing the Side Stabilizers

Attaching the LAN Cable and Power Cord

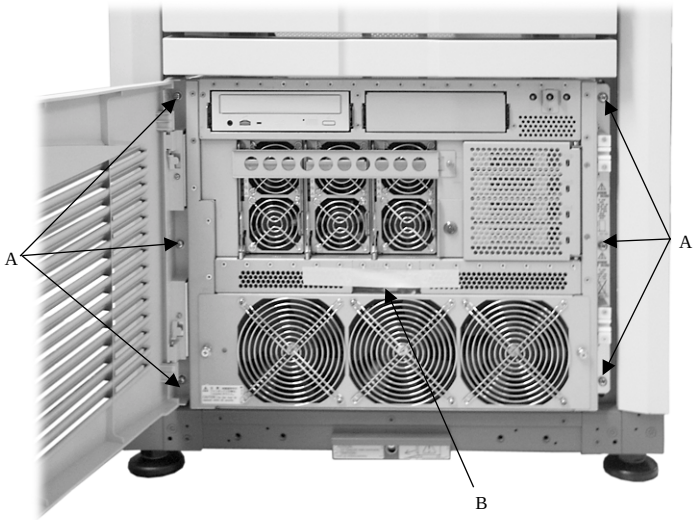
1. Open the rear door of the server. See Figure 12.
2. Remove the screw securing the ground cable attached to the server rear door. See Figure 12A.
3. Grasp the rear door and pull it upwards to remove it from the server. See Figure 12B.



A Ground Cable Screw
B Rear Door
C Tie-Wraps
D Rear Door Mounting Pin

Figure 12. Removing the Rear Door

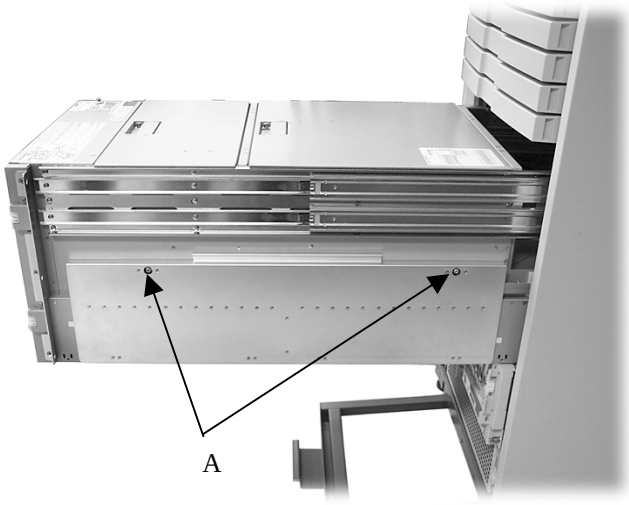
4. Open the 3 tie-wraps securing the AC cables to the server. See Figure 12C.
5. Remove 6 screws securing the server to the cabinet. See Figure 13A.



A Server Screws
B Front Handle

Figure 13. Removing the Server Mounting Screws

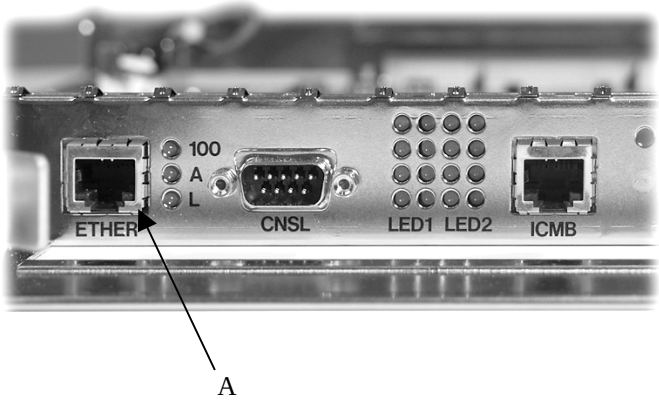
6. Using the front handle, slide the server out of the rack. See Figure 13B. Remove the two screws securing the panel on the right side of the server and remove the panel. See Figure 14A.



A Panel screws

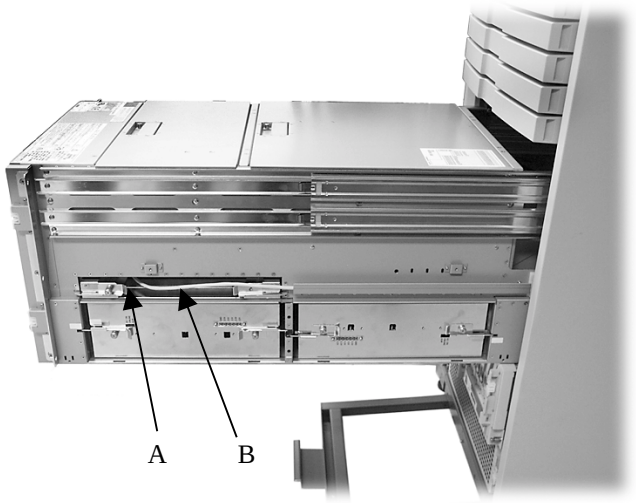
Figure 14. Removing the Panel Screws

7. Locate the service processor board and the ETHER connector on the board. See Figures 15 and 16. Connect the LAN cable to the ETHER connector on the service processor board. See Figure 15 and 16. Carefully feed the cable along the side of the server, through the cabinet, and to the rear of the cabinet. Route the cable so its path prevents pinching, stressing, or damage to the cable.



A LAN Connector

Figure 15. Locating the LAN Connector



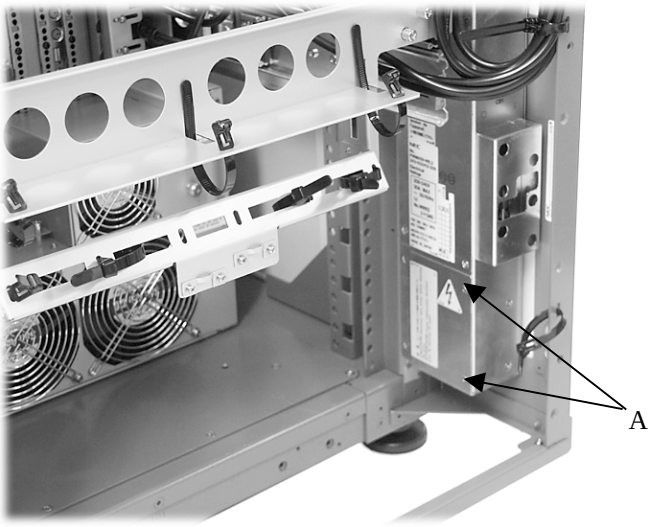
A Service Processor Board

B LAN Cable

Figure 16. Connecting the LAN Cable

8. Slide the server partway back into the cabinet, leaving enough to provide access to the AC connection box located at the bottom right corner of the server. See Figure 17.

9. Remove four screws securing the cover to the AC connection box. See Figure 17A.



A AC Connection Box Cover

Figure 17. Removing the AC Junction Box Cover

10. Route the AC cable (customer supplied) under the server and connect it to the terminals in the AC connection box. See Figures 18 and 19.

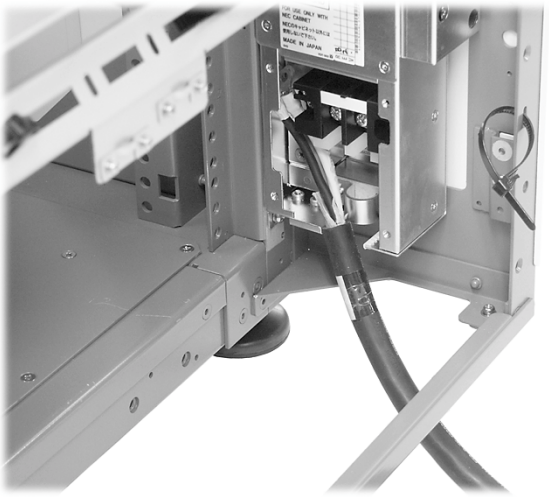
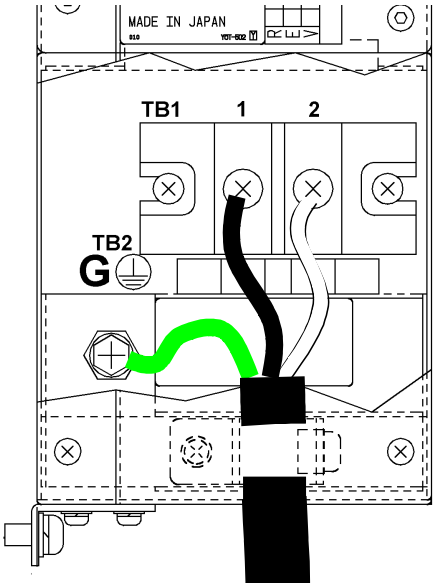


Figure 18. Routing the AC Cable to the AC Junction Box



Green wire to TB2 (green screw head)

Black wire to TB1-1

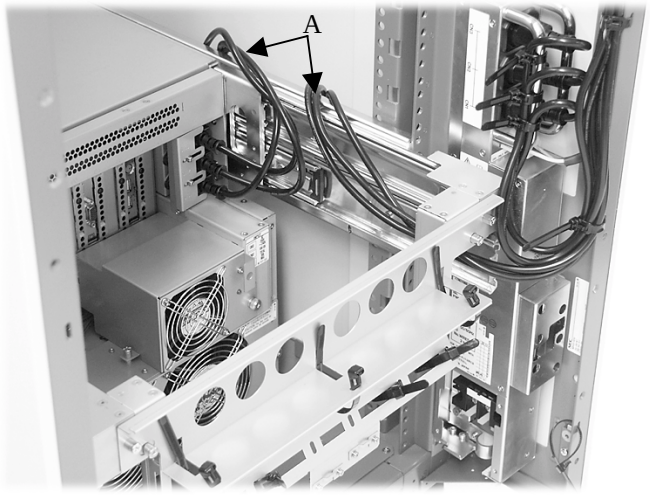
White wire to TB1-2

Figure 19. Connecting the AC Cable to the AC Junction Box

11. Install the cover on the AC connection box using the four screws removed in Step 10. See Figure 17A.

⚠ CAUTION

Before performing the next step, check to ensure all AC cables are clear of the server slide rails. See Figure 20A.

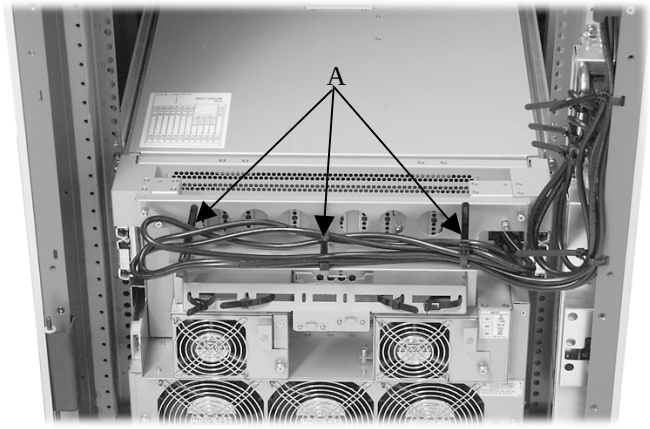


A AC Cables

Figure 20. Positioning the Cables Away From the Slide Rails

12. Slide the server all the way into the rack and secure it with the six screws removed in Step 4. See Figure 13A.

13. Route the AC cables over the three tie-wraps and secure the tie-wraps. See Figure 21A.



A Secured AC Cables

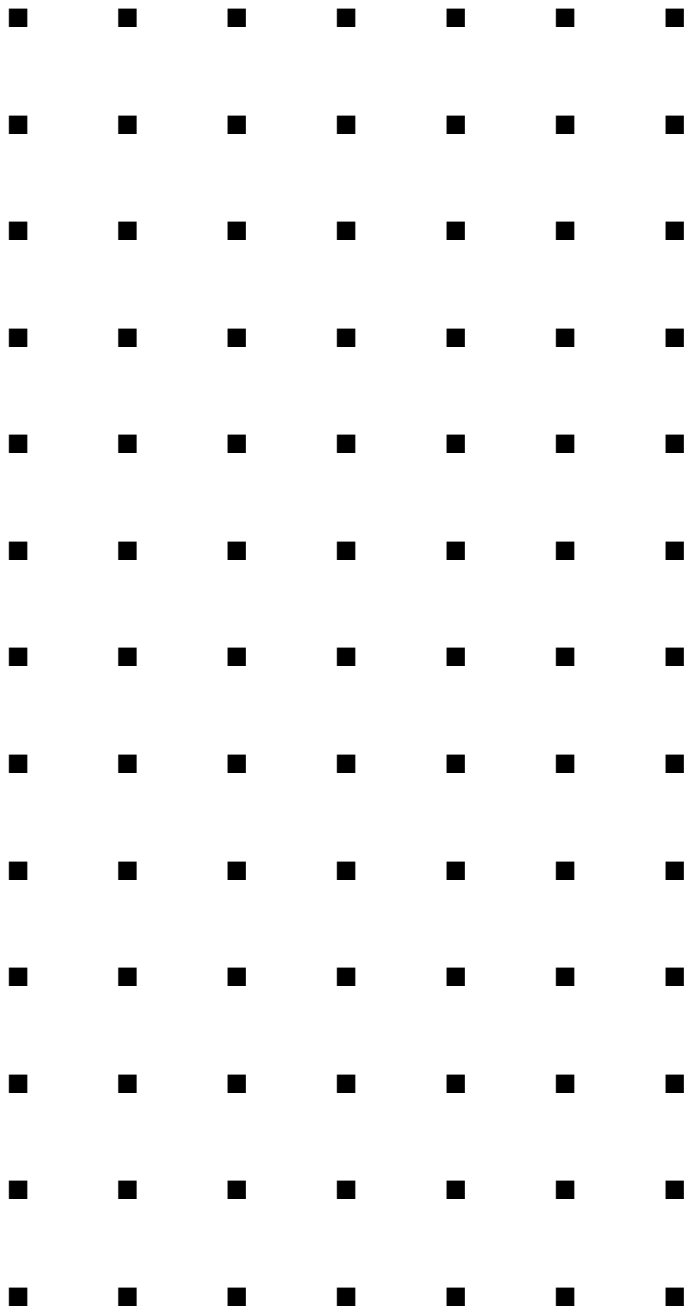
Figure 21. Securing the Cables

14. Slide the two pins on the inside of the rear door into the hinges on the cabinet. See Figure 12D.

15. Secure the ground cable to the server rear door with the screw removed in Step 2. See Figure 12A.

16. Close the rear door.

17. Plug the AC power cable into the dedicated AC connector.



455-01691-000